CLAIMS

1.   An on-line attenuation device for monomode
fibres, characterised in that it has, placed between
two monomode fibres (1n, 2n), at least one attenuating
element comprising at least one section of multimode
fibre with an index gradient (Gn) and at least one
section of silica fibre without a core (In).

2.   An on-line attenuation device according to
Claim 1, characterised in that the attenuation element
includes at least one other section of silica fibre
without a core (Jn), the section of fibre with an index
gradient (Gn) being placed between the sections of
silica fibre without a core (In, Jn).

3.   An on-line attenuation device according to
one of Claims 1 or 2, characterised in that the
attenuating element has the same external geometrical
parameters as the monomode fibres to which it is
connected.

4.   An on-line attenuation device according to
Claim 3, characterised in that the connection consists
in a welding of the ends of the fibres opposite each
other.

5. An on-line attenuation device according to any one of the preceding claims, characterised in that it comprises a plurality of attenuating elements (A) disposed so as to form a ribbon or a block so as to be placed between ribbons of monomode fibres (R_{1M}, R_{2M}).

6. A method of manufacturing an on-line attenuation device for monomode fibres, characterised in that it consists in successively performing steps of connecting and breaking fibre ribbons so as to obtain two ribbons of monomode fibres (R_{1M}, R_{2M}) connected through the attenuation device which is obtained by breaking at least one ribbon of fibres with an index gradient (RG) and connecting to at least one broken ribbon of silica fibres without a core (R_S).

7. A method of manufacturing an on-line attenuation device for monomode fibres according to Claim 6, characterised in that it includes the breaking of another ribbon of silica fibres without a core (R_S) and the connection to the broken ribbon of fibres with an index gradient (RG) thus placed between two ribbons of silica fibre without a core.

8. A method of manufacturing an on-line attenuation device for monomode fibres, according to one of Claims 6 to 7, characterised in that it includes the following steps:
- collectively connecting a ribbon of n monomode fibres with an index gradient (RG) to a ribbon of n silica fibres without a core (R_S);

- breaking the ribbon of n silica fibres without a core (R_S) so as to obtain n sections (In) of predetermined length (Ls),

- collectively connecting a ribbon of n monomode fibres (R_{1M}) to the n sections of silica without a core (In),

- breaking the ribbon of n multimode fibres with an index gradient (RG) so as to obtain n sections (Gn) of predetermined length (Lg),

- collectively connecting a ribbon of n monomode fibres (R_{2M}) to the n sections with an index gradient (Gn).

9. A method of manufacturing an on-line attenuation device for monomode fibres, according to Claim 8, characterised in that the last step is replaced by the following steps:

- collectively connecting a ribbon of n silica fibres without a core (R_S) to the n sections with an index gradient (Gn),

- breaking the ribbon of n silica fibres without a core (R_S) so as to obtain n sections (Jn) of predetermined length (L's),

- collectively connecting a ribbon of n monomode fibres (R_{2M}) to the n sections of silica without a core (Jn).